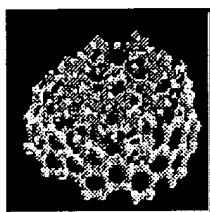


## Simulation of double-wall carbon nanotube melting

---

The associated MPEG movie shows the dynamics of melting and disintegration of a (5,5)@(10,10) double-wall carbon nanotube that is gradually heated up from absolute zero to a temperature of 7,800 degrees Kelvin.

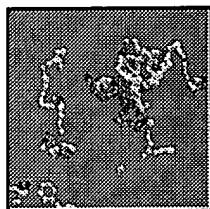
At one tube end, stable lip-lip interactions [see Y.K. Kwon *et al.*, Phys. Rev. Lett **79**, 2065 (1997)] bridge the gap between the inner and the outer tube, while the other end is kept open. Atoms inside the tube are shown in green and exposed edge atoms in blue. The extra atoms, which establish the lip-lip interaction, are shown in red.



### Double-wall carbon nanotube melting movie

(538 frames / 5,395,668 bytes)

As in human life, so in Nature: Destruction is easier and faster than construction. Even though not impossible, a shattered glass is unlikely to re-assemble from its fragments. The likely formation mechanism of nanotubes is a sequence of trials and errors, many more than could be visualized. In this sense, the following time-reversed fragmentation movie does not represent the physical reality, yet still gives us a glimpse at likely intermediate structures occurring during tube formation.



### Double-wall carbon nanotube formation movie

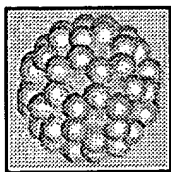
(535 frames / 5,378,753 bytes)



[... back to David Tomanek's home page](#)

---

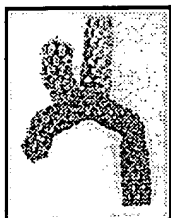
This page has been visited **1** times since March 9, 1997  
David Tomanek at Michigan State University / [tomanek@pa.msu.edu](mailto:tomanek@pa.msu.edu)



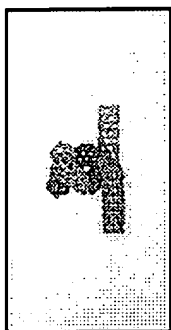
## Simulation of Nano-Velcro

---

The associated MPEG movie shows the dynamics of connecting and disconnecting two Nano-"Velcro" hooks.



Engaging a Nano-"Velcro" Joint



Unhooking a Nano-"Velcro" Joint



... back to David Tomanek's home page

---

This page has been visited [The server encountered an error while processing this directive.] times since May 27, 1999.

Last modification: 2000.08.14 (Monday) 15:11:14 EDT

David Tomanek at Michigan State University / [tomanek@pa.msu.edu](mailto:tomanek@pa.msu.edu)